

From the INTERNATIONAL BUREAU

**PCT**

NOTIFICATION OF TRANSMITTAL  
OF COPIES OF TRANSLATION  
OF THE INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY  
(CHAPTER I OR CHAPTER II  
OF THE PATENT COOPERATION TREATY)  
(PCT Rules 44bis.3(c) and 72.2)

To:

LEINWEBER & ZIMMERMANN  
Rosental 7 / II. Aufgang  
80331 München  
ALLEMAGNE

15. NOV. 2006

Date of mailing (day/month/year)  
09 November 2006 (09.11.2006)

Applicant's or agent's file reference  
102004009123

**IMPORTANT NOTIFICATION**

International application No.  
PCT/EP2005/001791

International filing date (day/month/year)  
21 February 2005 (21.02.2005)

Applicant

WABCO RADBREMSSEN GMBH et al

**1. Transmittal of the translation to the applicant.**

The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter I).



The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter II).

**2. Transmittal of the copy of the translation to the designated or elected Offices.**

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following designated or elected Offices requiring such translation:

None

The following designated or elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE, AG, AL, AM, AP, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EA, EC, EE, EG, EP, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

**3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).**

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability (Chapter II).

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned within the applicable time limit (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Authorized officer

Yolaine Cussac

Facsimile No. +41 22 338 82 70

Facsimile No. +41 22 338 82 70

# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference 102004009123	FOR FURTHER ACTION		See item 4 below
International application No. PCT/EP2005/001791	International filing date (day/month/year) 21 February 2005 (21.02.2005)	Priority date (day/month/year) 01 March 2004 (01.03.2004)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant WABCO RADBREMSSEN GMBH			

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- |                                     |              |   |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I    | Basis of the report   |
| <input type="checkbox"/>            | Box No. II   | Priority  |
| <input type="checkbox"/>            | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |
| <input type="checkbox"/>            | Box No. IV   | Lack of unity of invention  |
| <input checked="" type="checkbox"/> | Box No. V    | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/>            | Box No. VI   | Certain documents cited   |
| <input type="checkbox"/>            | Box No. VII  | Certain defects in the international application  |
| <input type="checkbox"/>            | Box No. VIII | Certain observations on the international application   |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland		Date of issuance of this report 01 November 2006 (01.11.2006)
Facsimile No. +41 22 338 82 70		Authorized officer  Yolaine Cussac
		e-mail: pt11@wipo.int

# PATENT COOPERATION TREATY

TRANSLATION

From the  
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing **See form PCT/ISA/210**  
(day/month/year)

Applicant's or agent's file reference  
**102004009123**

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
**PCT/EP2005/001791**

International filing date (day/month/year)  
**21.02.2005**

Priority date (day/month/year)  
**01.03.2004**

International Patent Classification (IPC) or both national classification and IPC  
**F16D55/00, F16D55/22**

Applicant  
**WABCO RADBREMSSEN GMBH**

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/EP

Authorized officer

Facsimile No.

Telephone No.

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2005/001791

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion has been established on the basis of a translation from the original language into the following language  
\_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

☐ a sequence listing

☐ table(s) related to the sequence listing

b. format of material

☐ in written format

☐ in computer readable form

c. time of filing/furnishing

☐ contained in the international application as filed.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2005/001791

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability:  
citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1-16</u>	YES
	Claims	<u></u>	NO
Inventive step (IS)	Claims	<u>1-16</u>	YES
	Claims	<u></u>	NO
Industrial applicability (IA)	Claims	<u>1-16</u>	YES
	Claims	<u></u>	NO

2. Citations and explanations:

1 Reference is made to the following document:

D1: US-A-4 632 227 (MERY ET AL) 30 December 1986 (1986-12-30)

2 Novelty

2.1 Document D1 is considered to be the closest prior art to the subject matter of claim 1. It discloses (see, in particular, figures 1 and 4; the references between parentheses relate to said document) a:

disc brake having

a brake disc (18) with a preferred running direction (C),

a first brake shoe (40) with a first centre of gravity (Ci) on a first side of the brake disc,

a second brake shoe (42) with a second centre of gravity (Ce) on a second side of the brake disc,

a calliper (10) for transmitting brake forces which are

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2005/001791

Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

generated with the second brake shoe onto the first side of the brake disc, having a first calliper limb on the first side of the brake disc, a second calliper limb on the second side of the brake disc and a connecting device for connecting the first calliper limb to the second calliper limb, and having

a brake application device (36) which has a centre axis standing perpendicularly on the brake disc and is designed to push the first brake shoe against the brake disc,

the second centre of gravity being offset, both in the state of rest and in the state of actuation of the brake, with respect to the first centre of gravity by a first predefined path ( $D_i + D_e$ ) in the direction of a brake disc run-out side which corresponds to the preferred rotational direction of the brake disc, and

the second calliper limb being offset with respect to the first calliper limb by a second predefined path in the direction of the brake disc run-out side.

2.2 The subject matter of claim 1 differs from this known brake disc in that

the connecting device is radially closer to the brake disc on the brake disc run-out side than on a brake disc run-in side, at least in that region in which it engages over the brake disc.

2.3 The subject matter of claim 1 is therefore novel (PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2005/001791

Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

Article 33(2)).

2.4 Claims 2-16 are dependent on claim 1; their subject matter is therefore likewise novel.

3 Inventive step

3.1 The feature mentioned under point 2.2 makes improved compensation possible of the moments which act on the brake calliper, which can therefore be considered to be the problem addressed by the present invention.

3.2 The solution which is proposed for this problem in claim 1 of the present application involves an inventive step (PCT Article 33(3)), as modifying of the disc brake known from D1 in the claimed way is not rendered obvious by the prior art.

3.3 The subject matter of dependent claims 2-16 is likewise considered to involve an inventive step.

4 Industrial applicability

The subject matter of claims 1-16 can be manufactured and used and is therefore industrially applicable pursuant to PCT Article 33(4).